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## **CLAIMS**

What is claimed is:

1. A graphical user interface, comprising:

a plurality of main displays, each for displaying an image set;

a user interactive system for receiving from a user a first location of an object-of-interest in one of said image sets; and

a correlation system for finding and displaying a second location, corresponding to said first location, of a corresponding second volume-of-interest in at least one of said other image sets.

- 2. The graphical user interface of claim 1 wherein a first volume-of-interest is defined about said first location of said object-of-interest.
- 3. The graphical user interface of claim 2 wherein said first and second volumes-of-interest are rendered as Shaded Surface Displays.
- 4. The graphical user interface of claim 1 wherein said image sets are rendered as Shaded Surface Displays.
- 5. The graphical user interface of claim 1 further comprising displays permitting the user to examine said volumes-of-interest with free viewpoints.

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and

- 6. The graphical user interface of claim 1 further comprising one or more data windows for displaying image properties of at least one of said image sets.
- 7. The graphical user interface of claim 1 further comprising a lock-scrolling system for
   5 synchronized scrolling of two or more image sets.
  - 8. The graphical user interface of claim 1 further comprising a cartwheel projection system for side-by-side display of two or more cartwheel projection spin windows.
  - 9. The graphical user interface of claim 1 further comprising:
    - a first property display for displaying physical properties of said object-of-interest;
  - a second property display for displaying physical properties of a second object-of-interest located within said second volume-of-interest; and

wherein said first and second property displays may be displayed side-by-side.

10. A program storage device, readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for a graphical user interface for an object-correspondence system, said method steps comprising:

providing a plurality of main displays, each for displaying an image set;

receiving from a user a first location of an object-of-interest in one of said image sets;

receiving a second location of a second volume-of-interest from a correlation system, said second location corresponding to said first location.

- 11. The storage device of claim 10 wherein a first volume-of-interest is defined about said first location of said object-of-interest.
- 5 12. The storage device of claim 11 wherein said first and second volumes-of-interest are rendered as Shaded Surface Displays.
  - 13. The storage device of claim 10 wherein said image sets are rendered as Shaded Surface Displays.
  - 14. The storage device of claim 11 further comprising machine readable code to allow the user to examine said volumes-of-interest with free viewpoints in 3D in synchronization.
  - 15. The storage device of claim 10 further comprising one or more data windows for displaying image properties of a volume-of-interest at least one of said image sets.
  - 16. The storage device of claim 10 further comprising machine-readable code for synchronized scrolling of two or more image sets.
- 20 17. The storage device of claim 10 further comprising machine-readable code for side-by-side display of two or more cartwheel projection spin windows.
  - 18. The storage device of claim 10 further comprising machine readable code for:

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and

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providing a first property display for displaying physical properties of said object-ofinterest;

providing a second property display for displaying physical properties of a second object-of-interest located within said second volume-of-interest; and

displaying said first and second property displays side-by-side.

19. A method of interfacing graphically with a user for an object-correspondence identification system, comprising the steps of:

providing a plurality of main displays, each for displaying an image set; receiving from a user a first location of an object-of-interest in one of said image sets;

receiving a second location of a second volume-of-interest from a correlation system, said second location corresponding to said first location.

- 20. The method of claim19 wherein a first volume-of-interest is defined about said first location of said object-of-interest.
- 21. The method of claim 20 wherein said first and second volumes-of-interest are rendered as Shaded Surface Displays.
- 22. The method of claim 19 wherein said volumes-of-interest are rendered as Shaded Surface Displays.

- 23. The method of claim 19 further comprising providing examination of said volumes-of-interest in 3D with free viewpoints in synchronization.
- 24. The method of claim 19 further comprising one or more data windows for displaying image
  properties of at least one of said image sets.
  - 25. The method of claim 19 further comprising providing a lock-scrolling system for synchronized scrolling of two or more image sets.
  - 26. The method of claim 19 further comprising providing a cartwheel projection system for sideby-side display of two or more cartwheel projection spin windows.
  - 27. The method of claim 19 further comprising:

providing a first property display for displaying physical properties of said object-of-interest;

providing a second property display for displaying physical properties of a second object-of-interest located within said second volume-of-interest; and

displaying said first and second property displays side-by-side.